Herpetology Study Guide BIOL 489 2015

Date:

Tuesday December 8th 930-320 and 5-630
If none of those times work, let me know and we can schedule something for Monday December 7th. Let me know ASAP because I will have to reserve the room and prep it.

Time frame:

The practical should take 30 minutes if you know your material and an hour plus if you don't know your material that well. You can show up anytime to take the practical so plan accordingly on how long you think you will take.

Material:

10 identifying species with cheat sheet
7 identifying species without cheat sheet
8 questions on labs from skulls to dissection

or

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7 identifying species without cheat sheet
8 questions on labs from skulls to dissection

Number of questions depends on what Dr. Harmon wants the point value of the test to be.

Cheat Sheet:

One piece of paper that can have 4 flow charts on it. If you use a cheat sheet, I will inspect them before you start the practical to make sure the information is presented in flow charts. My suggestion is to divide the piece of paper into four sections (2 on front, 2 on back): lizards, snakes, salamanders, and frogs. If you are unsure of what I mean, ask me sometime before the practical.

Species:

All species that have been represented in a jar throughout the semester could be on the test. When you identify the species, it must be the scientific name (*no common names*). For species with the cheat sheet, I might ask for family instead but I will not do this for the species without a cheat sheet. *Species without the cheat sheet will all be just scientific species name*.

Skulls:

Be able to identify if a skull is from a carnivore or omnivore and be able to explain how you would know. Explain what suction feeding is and why many aquatic species need this type of feeding. Know what a kinetic skull is and why it is needed in snakes. Know why some snakes have hinged fangs and others have fixed fangs. Know the phylogenetic distribution of anapsid, synapsid, and diapsid and which has evolved more than once on the tree. Define fangs vs teeth.

Genome:

Be able to define a gene, a scaffold, a chromosome, a genome, an exon, and an intron. Know what species have MC1R. If given a length of sequence and a known genome length, find the percentage of the entire genome the sequence represents. Know the difference between a haploid, diploid, and polyploid. Be able to explain a few differences between the *Anolis carolinensis* genome and *Xenopus tropicalis* genome.

Ecomorph:

Be able to define adaptive radiation, ecomorph, monophyletic, paraphyletic, polyphyletic, convergent evolution, coevolution, and divergent evolution. If given figures from mesquite and a question, interpret them to answer the question.

Dissection:

Define autotomy and the process of how it happens. If there is a dissected iguana, be able to identify if the iguana has regrown its tail, the heart, liver, lungs, kidney, and bladder. Know about intestine length compared to diet and the reasons why intestine length needs to change depending on food being consumed.

Extra Credit:

There is a potential of up to 10 extra points on the practical. These will be questions about anything that has been brought up since the beginning of lab and class, random herpetology questions, or random silly knowledge.